

**AMENDMENTS TO THE CLAIMS**

Please amend the claims as follows:

1. (Currently Amended) A correlator which figures out a correlation between an input signal which is a pulse train and a predetermined time-series signal, comprising:
  - a multiplier for multiplying the input signal by the predetermined time-series signal;
  - ~~an a first integrator-A for integrating an output-(i) from of the multiplier;~~
  - ~~a quantizer for quantizing an output-(ii) from of the integrator; and~~
  - ~~a negative feedback path for negatively feeding an output-(iii) from of the quantizer back to the first integrator-A.~~
2. (Currently Amended) The correlator as defined in claim 1, further comprising:
  - ~~an adder which adds the output-(i) of the multiplier to the output-(iii) having passed through the negative feedback path, of the quantizer and supplies the outputs (i) and (iii), which have been added to each other, an output to the first integrator-A.~~
3. (Currently Amended) The correlator as defined in claim 1, further comprising:
  - ~~an a second integrator-B for integrating the output-(iii) of the quantizer.~~
4. (Original) The correlator as defined in claim 1, further comprising:
  - a converter provided on the negative feedback path, which converts a digital signal to an analog signal.

5. (Original) The correlator as defined in claim 1, wherein, the input signal is an impulse train which has been subjected to pulse position modulation in accordance with digital data.

6. (Original) The correlator as defined in claim 5, wherein, the predetermined time-series signal is generated in accordance with impulses of the impulse train, the impulses being different from each other.

7. (Currently Amended) The correlator as defined in claim 1, wherein, the input signal is a the pulse train which has been subjected to BPSK modulation in accordance with digital data.

8. (Original) The correlator as defined in claim 7, wherein, the predetermined time-series signal is composed of rectangular waves corresponding to the pulse train.

9. (Currently Amended) A parallel correlator, comprising a plurality of correlators being parallel to each other, each of the plurality of correlators, which figures out a correlation between an input signal which is a pulse train and a predetermined time-series signal, including:

a multiplier for multiplying the predetermined time-series signal by the input signal;

an integrator-A for integrating an output-(i) from of the multiplier;

a quantizer for quantizing an output-(ii) from of the integrator; and

a negative feedback path for negatively feeding an output-(iii) from of the quantizer back

to the integrator-A.

10. (Original) The parallel correlator as defined in claim 9, further comprising a delay circuit for regulating a clock supplied to the plurality of correlators.

11. (Currently Amended) A correlator which figures out a correlation between an input signal which is a pulse train and a predetermined time-series signal, comprising:

a multiplier for multiplying the input signal by the predetermined time-series signal;  
a first integrator for integrating an output-(a) from of the multiplier;  
a sampling circuit for sampling an output-(b) from of the first integrator;  
a second integrator for integrating an output-(c) from of the sampling circuit;  
a quantizer for quantizing an output-(d) from of the second integrator; and  
a negative feedback path for negatively feeding an output-(e) from of the quantizer back

to the second integrator.

12. (Original) The correlator as defined in claim 11, wherein, the first integrator is an integrator which attenuates at a certain time constant.

13. (Currently Amended) The correlator as defined in claim 11, further comprising an adder which adds the output-(e) of the sampling circuit to the output-(e) having passed through the negative feedback path, of the quantizer and supplies the outputs (e) and (e), which have been added to each other, an output to the second integrator.

14. (Currently Amended) The correlator as defined in claim 11, further comprising a third integrator for integrating the output ~~(e)~~ of the quantizer.

15. (Original) The correlator as defined in claim 11, further comprising a converter provided on the negative feedback path, which converts a digital signal to an analog signal.

16. (Original) The correlator as defined in claim 11, wherein, the input signal is an impulse train which has been subjected to pulse position modulation in accordance with digital data.

17. (Original) The correlator as defined in claim 16, wherein, the predetermined time-series signal is generated in accordance with impulses of the impulse train, the impulses being different from each other.

18. (Currently Amended) The correlator as defined in claim 11, wherein, the input signal is ~~a~~ the pulse train which has been subjected to BPSK modulation in accordance with digital data.

19. (Original) The correlator as defined in claim 18, wherein, the predetermined time-series signal is composed of rectangular waves corresponding to the pulse train.

20. (Currently Amended) A receiver, comprising a correlator which figures out a correlation between an input signal which is a pulse train and a predetermined time-series signal, the correlator including:

a multiplier for multiplying the predetermined time-series signal by the input signal;  
an integrator- $A$  for integrating an output-(i) from of the multiplier;  
a quantizer for quantizing an output-(ii) from of the integrator; and  
a negative feedback path for negatively feeding an output-(iii) from of the quantizer back to the integrator- $A$ .

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